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NYS Thruway Authority

Bio Diesel



Gearing up to meet
the objectives of
Executive Order 142

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Fleet Overview



Fleet Size

- We currently operate and maintain over 6300 piece of equipment.
- These belong to three distinct groups – Thruway Authority, Canal Corporation & NYS Police Troop T
- Approximately 1400 of these are diesel powered

Geographic Area

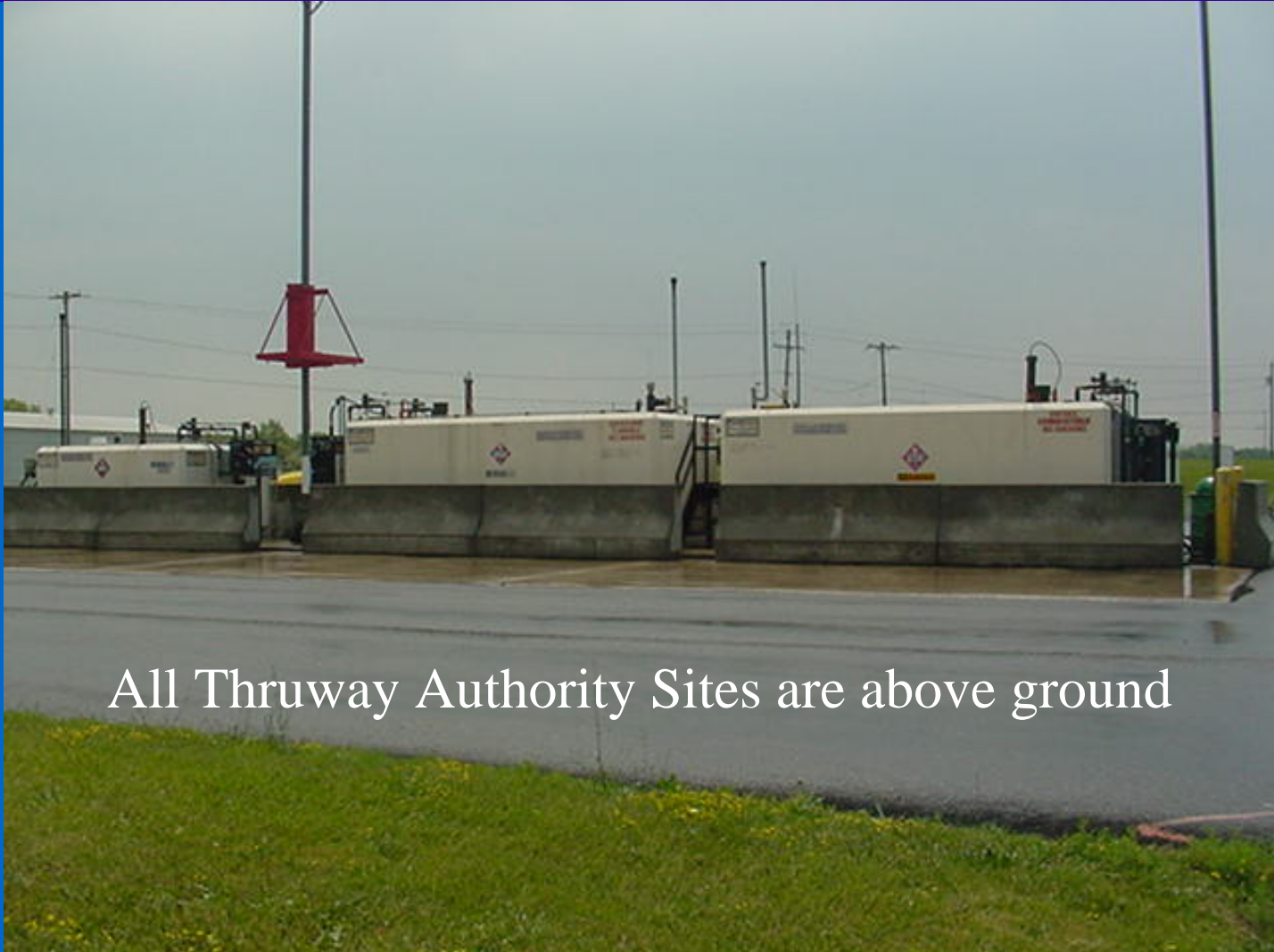
- 641 miles of Interstate – New York City to the state line south of Buffalo
- 524 miles of Canal System – Albany to Buffalo as well as north into Lake Champlain and south into the Finger Lakes region

Fueling Locations

- The Thruway Authority/Canal Corporation currently operate 40 fueling stations
- Diesel fuel is dispensed to many equipment types in the field via a Mobile Fuel Tank (62 tanks)
- Dispense approximately 1.25 million Gallons of Diesel annually
- Dispense approximately 1.63 million Gallons of Unleaded
- Our current fuel budget is \$4.7 million

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Typical NYS Thruway Fueling Facility



All Thruway Authority Sites are above ground

Move To Bio Diesel

- Picking a location with moderate temperatures
- Minimize the impact if we had a problem
- Leave ourselves an out
- Pilot it in an area where we felt we would have success
- Would the fuel be readily available
- Our New England section “Larchmont” was the best fit

Fuel Concerns

- Fuel Gelling problems in colder weather
- Solvency properties of Bio Diesel
- What affects will it have on engines and their warranties (ASTM Fuel Standard)
- Fuel Mileage
- Engine Start Ability
- Biological growth in storage and vehicle tanks
- Product delivery in a timely manner
- Fuel Price

Precautions

- Alternative fueling plan should we have a fuel problem or issue
- Key people in the loop should a problem arise
- Made sure we had a supply of fuel filters on hand for the pumps & vehicles
- Acid washing of tanks prior to switch to Bio Diesel (No we were below 35% Bio Diesel)

Over Coming Resistance To Change

- When we implemented the use of Bio Diesel we limited who knew in Larchmont
- Didn't want negativity to influence reality
- Didn't want maintenance staff to over react and perform maintenance they wouldn't normally perform

Implementation

- Our first B-20 fuel delivery was in the fall of 2002
- 2003 we used 21,109 Gallons
- 2004 we used 16,792 Gallons
- 2005 we used 18,578 Gallons
- Fuel was used in all diesel power equipment regardless of maintenance activity

To Date: There have been no fuel related problems or incidents

Bio Diesel Performance

- No complaints related to power
- No complaints related to mileage
- No cold weather problems or issues
- No warm weather problems or issues
- No increase in maintenance
- No complaints regarding exhaust odor
- No complaints regarding the raw fuel odor
- No storage or dispensing problems

Equipment at Larchmont

- 119 Pieces of equipment
- 32 Pieces are diesel powered
 - HD & MD Trucks
 - HD Loaders
 - Skid Steer Loaders
 - Tractors
 - Light Units
 - Arrow Boards
 - Tar Kettles
 - Brush Chippers

Truck Comparison

- Truck – 1992 International 7 Ton Tandem Dump
- Fleet Code – 10 trucks same make , model & year
- LTD – Fleet Average MPG 4.27
- LTD - Truck on Bio Diesel MPG 4.72
- 2005 YTD – Fleet Average MPG 4.04
- 2005 YTD – Truck on Bio Diesel MPG 4.9

Loader Comparison

- Loaders – 2001 JD 624H
- Fleet Code - 4 loaders selected same make, model, year and approximate hours.
- LTD Average 4 loaders GPH .56
- LTD Loader on Bio Diesel GPH .63
- 2005 YTD - Average GPH .57
- 2005 YTD - Loader on Bio Diesel GPH .51

Mowing Tractor Comparison

- Tractor – 2001 JD 6410 W/Tiger Mowing System
- Fleet Code – 12 tractors same make, model & Year.
- LTD – Fleet average GPH .38
- LTD – Tractor on Bio Diesel GPH .42
- 2005 YTD – Fleet Average GPH .35
- 2005 YTD – Tractor on Bio Diesel GPH .34

Meeting EO 142

- Knowing your annual Diesel Fuel consumption
- Knowing the availability/source of Bio Diesel –
Minimizing Expense
- Percentage or blend B2, B5, B10, B20
- EO is based on B100 consumption
- Roll out plan for Bio Diesel expansion into 2012
- Long range plan to purchase all diesel as B10

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Thank You

